

November 12, 2009

Mr. Terry O'Clair
Director, Division of Air Quality
North Dakota Department of Health
918 E. Divide Avenue, 2nd Fl
Bismarck, ND 58501-1947

RE: NO_x Best Available Control Technology Analysis Study - Supplemental Reports for M.R. Young Station Units 1 and 2, dated November 2009

Dear Mr. O'Clair:

In accordance with the July 27, 2006, new source review enforcement consent decree, Minnkota Power Cooperative, Inc. ("Minnkota") submitted a NO_x Best Available Control Technology Analysis Study to the North Dakota Department of Health ("NDDH") on October 4, 2006. Based on this submission, as supplemented by responses to various comments by NDDH and the U.S. Environmental Protection Agency ("EPA"), NDDH issued its preliminary Best Available Control Technology Determination ("BACT Determination") on February 27, 2008. The preliminary BACT Determination concluded that selective catalytic reduction ("SCR") technologies were technically infeasible at Minnkota's Milton R. Young Station ("MRYS") Unit 1 and Unit 2. Consequently, NDDH did not analyze SCR technology beyond Step 2 of EPA's Top-Down BACT Analysis method. Subsequently, NDDH determined that low-dust and tail-end SCR technologies were technically feasible and in a letter dated July 15, requested that Minnkota submit an economic analysis and other information required by Steps 3 and 4 of the top down BACT analysis process for low dust and tail end SCR applications at Milton R. Young Station.

In response to this request, please find enclosed two reports entitled "NO_x Best Available Control Technology Analysis Study - Supplemental Report for M.R. Young Station Unit 1" and "NO_x Best Available Control Technology Analysis Study - Supplemental Report for M.R. Young Station Unit 2", both dated November 2009. This analysis is supplemental to Minnkota's original October 2006 BACT Analysis as well as all other materials Minnkota has submitted in this proceeding.

The enclosed reports indicated both low dust and tail end SCRs are not economically acceptable on either Unit 1 or Unit 2. For Unit 1, the Unit Control Costs(UCCs) range from a low of \$3,944/ton to a high of \$6,597/ton for the low dust or tail end options with

Advanced Separated Over Fire Air. These UCCs are approximately 270 percent to 525 percent of the UCC for SNCR w/ASOFA. The incremental costs per ton from SNCR w/ASOFA to a low dust or tail end SCR option range from a low of \$7,058 to \$15,550/ton. All of these cost parameters show low dust and tail end SCR are not economically acceptable.

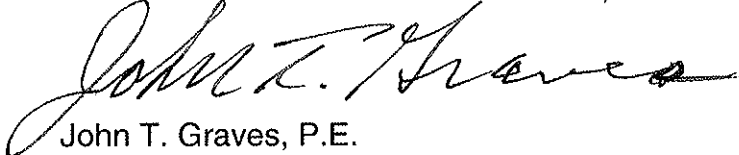
Under the prevailing standard of review, *People to Save the Sheyenne River, Inc. v. North Dakota Dept. of Health*, 697 N.W.2d 319 (N.D. 2005), NDDH's BACT Determination is entitled to significant deference, and may only be set aside if—based on the record before it—NDDH's decision was the product of an irrational mental process or if a reviewing court can discern no rationale for the decision. EPA submitted comments on the BACT Determination on July 31, 2008, expressing its disagreement with a number of technical conclusions, chief among them that neither SCR technology was technically feasible at MRYS. EPA suggested that NDDH complete the remainder of the Top-Down BACT Analysis process for SCR. NDDH requested that Minnkota prepare a supplement to its original October 2006 BACT Analysis and include the balance of the Top-Down BACT Analysis approach for SCR technology. Minnkota is confident that under the *People to Save the Sheyenne River* standard, NDDH's February 2008 BACT Determination was based on a rational mental process supported by a rationale evident in the record. More specifically, Minnkota believes that its submissions and NDDH's original February 2008 BACT Determination are correct: low-dust and tail-end SCR technologies are technically infeasible at MRYS Unit 1 and Unit 2, because of problems associated with catalyst fouling and deactivation, primarily through concentrations of alkali mineral compounds; This is bolstered by the fact that the two catalyst vendors Minnkota worked with while doing the in depth cost analysis told us that they would not offer any catalyst life guarantees without extensive testing. This both supports the prior conclusions reached by Minnkota and the NDDH as to the potential of catalyst poisoning and that SCT technology is not currently "available" for application at either unit at Milton R. Young Station.

Minnkota believes that the total record, both technical and economic, supports a finding that Advanced Separated Over-fire Air with Selective Non-catalytic Reduction constitutes BACT for Milton R Young Station Units 1 and 2.

Should you have any questions concerning this submittal, please contact me at 701-795-4221.

Sincerely,

MINNKOTA POWER COOPERATIVE, INC.



John T. Graves, P.E.
Environmental Manager

C: David Sogard
Ron Rutherford, USEPA